

**METHOD AND APPARATUS FOR CHARACTERIZING MATERIALS BY USING A
MECHANICAL RESONATOR**

ABSTRACT

A method and apparatus for measuring properties of a liquid composition includes a mechanical resonator, such as a cantilever, connected to a measurement circuit. The mechanical resonator can be covered with a coating to impart additional special detection properties to the resonator, and multiple resonators can be attached together as a single sensor to obtain multiple frequency responses. The invention is particularly suitable for combinatorial chemistry applications, which require rapid analysis of chemical properties for screening.